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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,138	12/11/2003	Alain Josee Joseph Godefroid	DN2003194	7376

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THE GOODYEAR TIRE & RUBBER COMPANY
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EXAMINER	
MAKI, STEVEN D	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/733,138	GODEFROID, ALAIN JOSEE JOSEPH	
	Examiner	Art Unit	
	Steven D. Maki	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-9 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2) **Claims 1-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukata et al (WO 95/18022) in view of Heinen (US 6415835).**

Fukata et al, directed to improving the discharge of water out of a groove to prevent hydroplaning, discloses a tire for a vehicle (e.g. pneumatic tire for an automobile) having a tread comprising longitudinal grooves and transverse grooves wherein the bottom of the circumferential groove has a waved bottom, which extends over the entire width of the bottom 11a of the groove. The waved bottom comprises "projections" / "peaks". Each of the "projections" / "peaks" has a top 11b. See figures 1, 2(a), 2(b) and 3(a). The wave height h ("projection height h") is 1-4 mm or more specifically 2-3 mm. See page 13. The wavelength f of the waved bottom ("projection pitch f") is 1-150 mm or more specifically 5-15 mm. See page 14. In example, 1, the sine wave has a width of 4 mm, a height of 3 mm and a wavelength of 5 mm. In example 1, the "projection" therefore has a width of 4 mm, a height of 3 mm and a pitch of 5 mm. The projection is oriented at 90 degrees to the groove centerline. See figures 1, 2(a) ad 2(b).

As to claim 1, it would have been obvious to one of ordinary skill in the art to orient the peaks of Fukata et al's waved grooved bottom at an angle of 10-50 degrees (e.g. 45 degrees) to the centerline such that the pitch length is 0.75-1.25 times the

projection length since (1) Fukata et al teaches orienting the peaks of the waved bottom transverse to the groove centerline (i.e. at 90 degrees to the groove centerline), (2) Fukata et al teaches spacing the peaks such that the wavelength (pitch length) of the peaks is 1-150 mm (5-15 mm) so that water can be rapidly discharged from the groove and (3) Heinen, also directed to improving the ability of a groove of a pneumatic tire to discharge water, suggests orienting peaks, which extend across the groove bottom of a circumferential groove, such that the peaks 22 are skewed with respect to the median plane line by an angle of 45-90 degrees (the angle being 90 degrees in the embodiment of figure 7).

Example: In example 1 of Fukata et al, the groove width is 4 mm and the pitch length is 5 mm. If the peaks are *inclined at 45 degrees instead of 90 degrees* with respect to the grove centerline, then the projection length along the centerline of the peak, which extends from one wall of the groove to the other wall, is 4 mm. With a pitch length of 5 mm and a projection length of 4 mm, the pitch length is 1.25 times the projection length (falling within the claimed range of 0.75 to 1.25).

As to claims 2 and 3, the claimed maximum radial height of the projections being 35% / projections terminating at a height of 40-60% of the groove depth would have been obvious in view of Fukata's teaching to use a wave height (projection height) of 1-4 mm; it being noted that Fukata et al discloses a groove depth of 6 mm in example 1.

As to claims 4 and 5, Fukata et al teaches using the waved bottom in the transverse and longitudinal grooves.

As to claims 6, 7 and 9, see the cross sectional shapes for the waved bottom in figures 3(a), 3(b) and 3(c).

3) **Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukata et al in view of Heinen as applied above and further in view of Shesterkin (US 2268344).**

As to claim 8, it would have been obvious to provide the radially outermost surface of Fukata et al's projections such that the radially outermost surface is curved radially inward as claimed in view of the suggestion from Shesterkin (figures 2,4) to provide projections at the rounded bottom of a longitudinal groove such that the radially outermost surface is curved radially inward (figures 2, 4).

Remarks

4) The remaining references are of interest.

5) No claim is allowed.

6) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
June 20, 2005

STEVEN D. MAKI
PRIMARY EXAMINER
~~GROUP 1300~~
AU 1733

6-20-05